

REMARKS/ARGUMENTS

STATUS OF CLAIMS

In response to the Office Action dated October 3, 2007, claims 1-3, 11, 12 and 17 have been amended. Claims 1-6, 9-17, 20, 23, 27 and 29-31 are now pending in this application. No new matter has been added.

The Examiner indicates that claims 7, 8, 18, 19, 22-26 and 28 have been withdrawn from consideration (as being directed to non-elected species). However, as the Examiner has not treated claim 21 and claim 23 has been rejected, it is believed that the Examiner intended that claims 7, 8, 18, 19, 21, 22, 24-26 and 28 have been withdrawn from consideration as being directed to non-elected species

REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 3 and 11 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

With respect to claim 3, the Examiner maintains that there is insufficient antecedent support for “part” in lines 7 and 12.

By this response, claim 3 has been amended to recite “a part...” at each of lines 7 and 12.

With respect to claim 11, the Examiner maintains that there is insufficient antecedent support for “the word line” in line 3.

By this response, claim 11 has been amended to delete “or the word line”. Claim 12 has been amended for consistency with amended claim 11.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 102 AND § 103

I. Claims 1-6, 9-11, 13, 16, 17, 23 and 29- 31 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Shukuri (US 2006/0008992). However, in view of the Examiner's comments regarding claim 12 on page 3 of the Office Action, it is believed that the Examiner intended claims 1-6, 9-13, 16, 17, 23 and 29-31 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Shukuri (US 2006/0008992).

In the embodiments of Shukuri that have (i) memory function bodies formed on opposite sides of the gate electrode (claim 1), (ii) charge storage regions in a shape of a film parallel to a surface of the semiconductor layer and existing over part of the channel region and part of the corresponding diffusion region, and straddling a boundary therebetween (claim 2) and (iii) memory function bodies formed so as to extend along the word line on opposite sides of the word line (claim 3), there is a split gate configuration. This is different from the present application where all embodiments have a single gate electrode.

To expedite prosecution, independent claim 1 has been amended to recite, *inter alia*:

...
a gate conductor formed on the semiconductor layer, said gate conductor consisting of a single gate electrode formed on the semiconductor layer with a gate insulation film disposed therebetween;
...
, wherein
gate conductor functions for writing to, and erasing and reading from the semiconductor device are solely carried out with the single gate electrode.

Independent claim 2 has been similarly amended.

In addition, independent claim 3 has been amended to recite, *inter alia*:

...
each of the plurality of memory elements comprising:
a semiconductor layer;
a gate conductor formed on the semiconductor layer, said gate conductor consisting of a single gate electrode and comprising a part of the word line;
...
, wherein
gate conductor functions for writing to, and erasing and reading from each memory element are solely carried out with the single gate electrode.

Thus, each of amended independent claims 1, 2 and 3 require a single gate electrode for a gate conductor and that gate conductor functions for writing to, and erasing and reading from each semiconductor device/memory element are solely carried out with the single gate electrode. This is different from Shukuri where gate conductor functions for writing to, and erasing and reading from each semiconductor device/memory element requires both a select gate and a control gate. Therefore, amended independent claims 1-3, as well as dependent claims 4-6, 9-13, 16, 17, 23 and 29-31, are patentable over Shukuri.

II. Claims 14, 15 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shukuri (US 2006/0008992).

However, claims 14, 15 and 20 depend directly or indirectly from amended independent claim 1. Therefore, claims 14, 15 and 20 are also patentable over Shukuri.

III. In view of the above, the allowance of claims 1-6, 9-17, 20, 23, 27 and 29-31, as amended, is respectfully solicited.

CONCLUSION

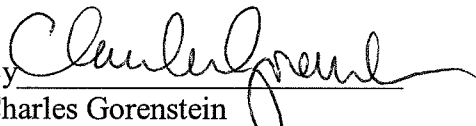
In view of the above, applicant(s) believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Edward J. Wise (Reg. No. 34,523) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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